

TWO NEW SPECIES OF *PELASTONEURUS* FROM ROOSEVELT ISLAND,
DISTRICT OF COLUMBIA (DIPTERA: DOLICHOPODIDAE)

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Abstract.—The new species *Pelastoneurus comatus* and *P. potomacus* are described from the Potomac shore of Roosevelt Island, District of Columbia.

Key Words: *Pelastoneurus*, new species, Dolichopodidae, Potomac River, Roosevelt Island

A series of short collecting stops on Roosevelt Island, District of Columbia, during the Spring of 1991 were expected to be rather uneventful, but on the first attempt collections were obtained of two undescribed species of *Pelastoneurus*. One of the two species was recollected on subsequent visits to the island while the other is still known from only one specimen. The new species are particularly unexpected because previous collecting experience would indicate that *Pelastoneurus* is not a genus in which many novelties are likely in eastern North America.

The habitat of the two new species is along the muddy edges of the Potomac River where it is doubtful that either species could have occurred during the more polluted times of the river's recent history. Although presently known only from Roosevelt Island, both species obviously must have a wider range extending into some areas not affected by the past pollution. The specific localities on the island were also disturbed during the last few decades by construction of the Roosevelt bridge.

Other Dolichopodidae collected on the same muddy shore during the collecting trips in May and June 1991 include the widely

distributed *Pelastoneurus vagans* Loew of the United States and Mexico, the local *Rhamphium brevilamellatum* Van Duzee known also from nearby northern Virginia, *Tachytrechus rotundipennis* Greene also of New Jersey and Delaware, and *Gymnopternus annulipes* H. Robinson previously known from Tennessee and Florida.

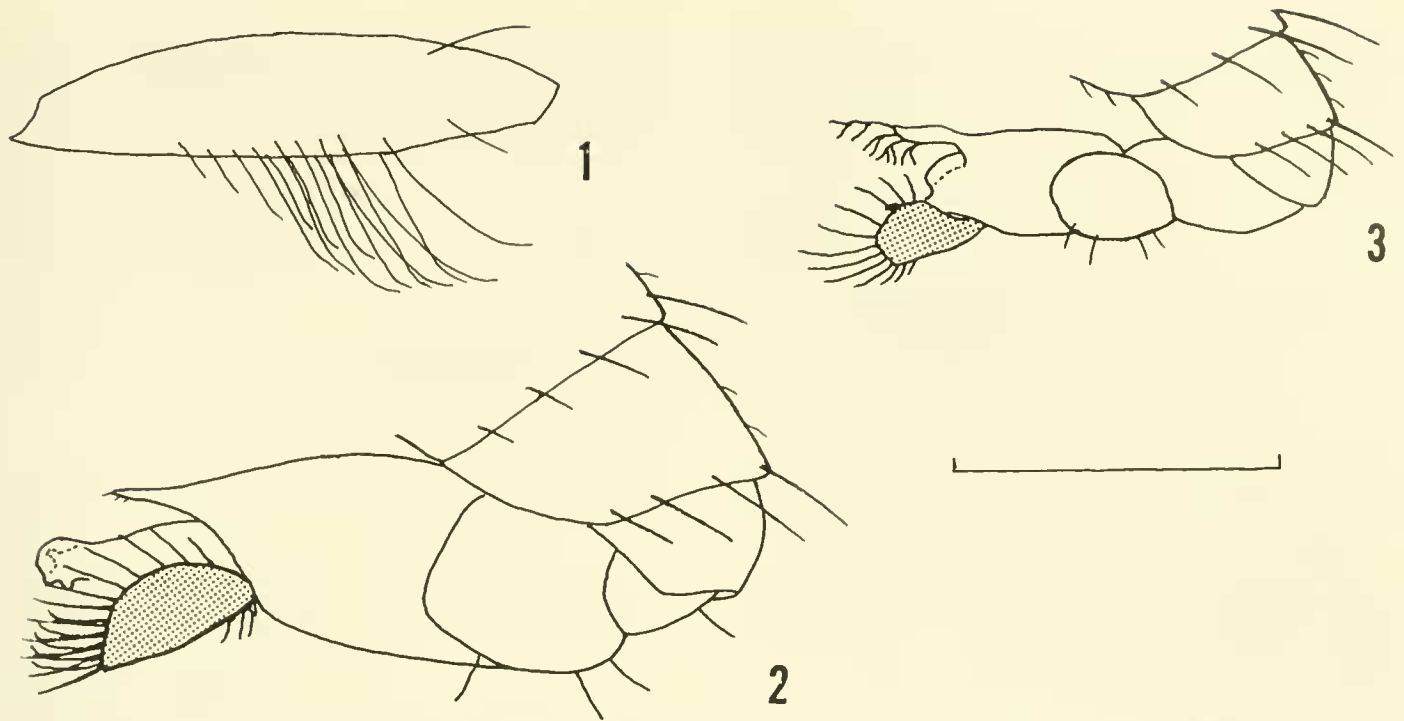
The new species are as follows.

***Pelastoneurus comatus* H. Robinson,**
NEW SPECIES
Figs. 1, 2

Male.—Length 4.3 mm; wing ca. 4 mm by 1.3 mm.

Face $\frac{1}{4}$ as wide as head, with lateral and lower margins nearly straight, strongly bulging and very slightly broader in lower $\frac{3}{5}$, slightly yellowish-green above, mostly white-pollinose; front shining metallic blue-green with yellowish reflections near antennae. Palpi broad, grayish pollinose, with scattered short black setae; proboscis black. Antennal segments 1 and 2 blackish above, dark yellowish below; segment 3 blackish, shorter than high, rounded apically, arista from near base above, ca. $\frac{5}{6}$ as long as face. Lower postocular setae black.

Thorax with mesonotum greenish brown



Figs. 1-3. *Pelastoneurus* sp., males. 1-2. *P. comatus*. 1. Hind femur. 2. Genitalia. 3. *P. potomacus*, genitalia. Line = 1 mm.

slightly dulled with yellowish pollen anteriorly, shining purplish posteriorly, scutellum greenish, margins above wings from notopleura to scutellum black, white pollinose on notopleura; pleura greenish, slightly dulled with pale yellowish pollen.

Legs mostly yellow; basal corner of coxa I, outside of coxae II & III, extreme tip of femur III, tip of tibia III, tarsi I from joint 3 or 4, and tarsi II & III from tip of basitarsus brown. Femora I & II with scarcely differentiated preapicals posteroventrally, II with sparse erect hairs ventrally near middle with longest as long as femur width, III (Fig. 1) with dense brush of hairs ventrally in 3-4 series, shorter before middle, many beyond middle much longer than femur width. Tibia I with 3 small anterodorsals in slightly stouter darker anterodorsal series; 2 posterodorsals, 1 smaller near 2/7 and larger near 4/7; 3 small subapicals and apicals anterodorsally, posterodorsally and posteroventrally. Tibia II with 3 large anterodorsals near 1/5, 2/5, 3/4, 1 small near 1/8; 2 larger posterodorsals near 1/3, 4/5, 1 smaller near 1/5; 1 large anterodorsal near 1/2; 5 subapicals or apicals. Tibia III with 4 large an-

terodorsals near 1/7, 3/8, 1/2, 5/7; 3 large posterodorsals near 1/6, 3/8, 4/7, 1 small near 1/7; 1 large anterodorsal near 2/3; 3 apicals, none posteriorly. Tarsi plain except very narrow felt line ventrally on I and small ventral setae on basitarsus III, lengths of tarsal joints from base as, I. 0.35, 0.25, 0.20, 0.10, 0.15 mm, II. 0.65, 0.35, 0.25, 0.20, 0.20 mm, III. 0.50, 0.61, 0.50, 0.40, 0.35 mm.

Wing elliptical with shallowly rounded anal lobe; surface grayish, veins brown. Costa not enlarged near base; R_{2+3} scarcely curved backward, R_{4+5} curving backward slightly more near tip; last of M_1 curving gradually forward beyond middle, ending close to tip of R_{4+5} well before wing apex; crossvein nearly perpendicular to base of M_1 , scarcely longer than last of CuA_1 . Calypter and halter yellow, former with black setae.

Abdomen with terga metallic yellowish green with slight white pollen on lateral surfaces except at margins. Genital capsule (Fig. 2) elongate, stout, blackish brown with slight whitish pollen on sternite 8; cerci blackish, oblong-elliptic with many black marginal

setae on tip and outer margin about as long as lamella width, inner apical prongs with only 2 simple small black setae, inner appendages brown, projecting as small ear-like lobes and a short central peg.

Holotype: Male. District of Columbia: Roosevelt Island, shore by bridge, May 18, 1991, H. Robinson (USNM 104500).

The most distinctive feature of *Pelastoneurus comatus* is the dense fringe of ventral setae on the hind femur. The species would key in Robinson (1964) to *P. seticauda* Van Duzee of Missouri and Tennessee which has a similar type of broad and bulging male face. *Pelastoneurus seticauda* lacks the long hairs on the hind femur, has more pointed ovate cerci, and has inner genitalia with a stout curved spine instead of the large projecting mass bearing earlike apical lobes.

***Pelastoneurus potomacus* H. Robinson,
NEW SPECIES**

Fig. 3

Male.—Length 3.0–3.4 mm; wing 2.7–3.0 mm by 0.9–1.0 mm.

Face $\frac{1}{2}$ as wide as head, lateral and lower margins straight, bulging in lower $\frac{1}{2}$, slightly metallic bluish above, mostly silvery pollinose; front shining metallic blue. Palpus broad, blackish with slight whitish pollen, with scattered short black setae; proboscis black. Antennal segments 1 and 2 pale brownish; segment 3 blackish, shorter than high, rounded-truncate apically; arista from near base above, ca. $\frac{3}{4}$ as long as face. Lower postocular setae black.

Thorax with mesonotum greenish brown anteriorly scarcely dulled with pollen, shining purplish posteriorly, scutellum greenish with purple tinges, a black streak laterally above wing, whitish pollinose on notopleura; pleura greenish dulled with slight yellowish pollen.

Legs mostly yellow, basal $\frac{1}{4}$ of coxa I, outside of coxae II & III, and tarsi II & III from near tips of basitarsi brown. Femora I & II with scarcely noticeable preapicals posteroventrally, femur III with additional

preapical anteroventrally, II & III with fine setulae more erect ventrally. Tibia I with 3 small anterodorsals; 2 posterodorsals 1 small near $\frac{1}{4}$ and 1 larger near $\frac{4}{7}$; 3 small subapicals and apicals anteriorly and ventrally. Tibia II with 3 large anterodorsals near $\frac{1}{7}$, $\frac{3}{7}$, $\frac{5}{7}$. 1 small near $\frac{1}{8}$; 2 large posterodorsals near $\frac{1}{3}$, $\frac{3}{4}$, 1 small near $\frac{1}{5}$; 1 large anteroventral near $\frac{1}{2}$; 5 apicals largest posteriorly. Tibia III with 3 large anterodorsals near $\frac{1}{7}$, $\frac{3}{7}$, $\frac{5}{7}$; 3 large posterodorsals near $\frac{1}{3}$, $\frac{3}{7}$, $\frac{3}{5}$, 1–2 small near $\frac{4}{5}$; 3 large apicals with none posteriorly. Tarsi plain except ventral white felt on I and small ventral setae near base of basitarsus III, lengths of tarsal joints from base as, I. 0.20, 0.15, 0.10, 0.08, 0.10 mm, II. 0.40, 0.20, 0.15, 0.10, 0.10 mm, III. 0.30, 0.45, 0.30, 0.20, 0.20 mm.

Wing elliptical with shallowly rounded anal lobe; surface grayish, veins brown. Costa not enlarged near base; R_{2+3} nearly straight; R_{4+5} curving slightly backwards; last of M_1 curving gradually forward beyond middle, ending close to R_{4+5} well before wing apex. Crossvein at slightly obtuse angle from base of M_1 , slightly shorter than last of CuA_1 . Calypter and halter yellow, former with black setae.

Abdomen with terga dark metallic green with slight white pollen on lateral surfaces except near margins. Genital capsule (Fig. 3) elongate, rather narrow, with stout peduncle almost as broad as capsule, blackish brown with slight pale pollen near base; cerci blackish, oval with fan of black marginal setae somewhat longer than length of lamella, inner apical prongs with dense branching pale hairs dorsally, the apical branching hairs longer than setae of cerci.

Female.—Face ca. $\frac{1}{4}$ as wide as head, brownish pollinose below, paler near margins, strongly bulging in lower $\frac{3}{5}$; palpi pale whitish; antennae blackish with segments 1 and 2 and base of 3 more yellow, 3 only $\frac{2}{3}$ as long as high, more rounded apically.

Specimens: District of Columbia: Roosevelt Island, shore by bridge, all H. Rob-

inson, 1991. Holotype male, June 2, 1991 (USNM 104501); allotype female, May 19; paratypes 2 males May 18, 1 male May 19, 5 males June 2.

Pelastoneurus potomacus seems well established on the western shore of Roosevelt Island near the bridge. The species keys in Robinson (1964) to the couplet with *P. lamellatus* Loew and *P. parvus* Aldrich, and its keys in Van Duzee (1923) to *P. parvus*. Of the two, *P. parvus* seems closest because of its comparatively narrow genital capsule and more rounded cerci. The new species differs from both the potential relatives by having branched hairs on the apical projection of the genital capsule. In addition, the reexamined type specimen of *P. parvus* has much shorter yellowish brown marginal hairs rather than long black setae on the cerci, a hind tibia with 4 large anterodorsals, and a more pointed third antennal segment about half again as long as high. The

branched hairs on the tip of the genital capsule are not as long as those found in *P. laetus* Loew or *P. proximus* Aldrich. The latter two species differ more obviously from *P. potomacus* by having cerci nearly as long as their genital capsules. *Pelastoneurus proximus* to which the species keys in Aldrich (1904) differs further by having a brownish or yellowish face.

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